CITY OF
SALMON ARM

Memorandum from the Engineering and Public Works Department

TO:	Director of Development Services
DATE:	29 January 2025
PREPARED BY:	Mustafa Zakreet, Engineering Assistant
SUBJECT:	**VARIANCE PERMIT APPLICATION FILE NO. VP- 612**
OWNER:	Ryan Scorgie / Cam McMinn
APPLICANT:	**Ryan Scorgie / Cam McMinn**
LEGAL:	Lot 1, Section 13 Township 20, Range 10, W6M KDYD, Plan KAP47381
CIVIC:	**370– 20 Street SE**

Further to the request for variance dated December 04, 2024 the Engineering Department has reviewed the site and offers the following comments and recommendations relative to the requested variance:

The applicant is requesting that Council waive the following requirements of the Subdivision and Development Servicing Bylaw No. 4293 (SDSB).

1. Sanitary sewer main upgrades

Background:

A subdivision application has been submitted to the City, proposing to subdivide one low-density residential lot into two. A condition of approving this application is to upgrade the existing 150mm sanitary sewer main, which runs along the east parcel line, to a 200mm main as the Subdivision Development Servicing Bylaw (SDSB requires a minimum sanitary pipe diameter of 200mm.

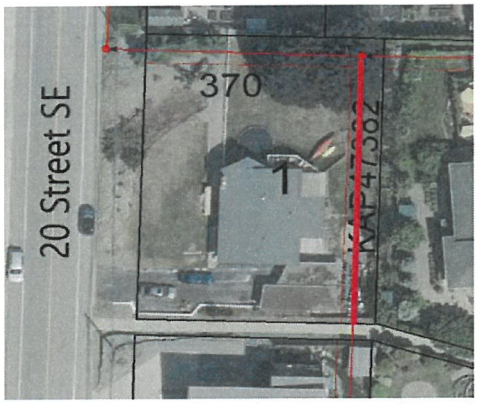


Figure 1- Sanitary Sewer line Requiring Upgrade

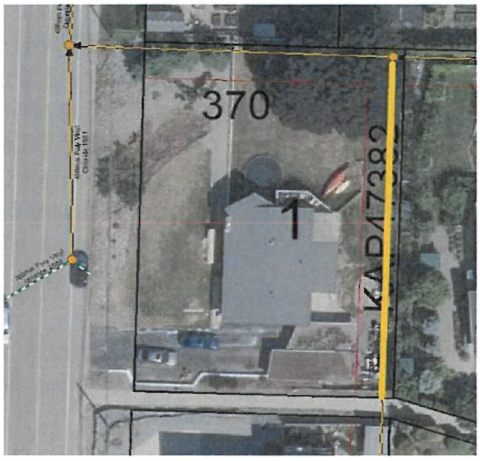
Lawson Engineering has presented a technical argument, supported by calculations, demonstrating that the existing 150mm sanitary sewer main can convey the future flow for the maximum potential development that can be connected to this main per the current Official Community Plan designation. The City's engineering team has verified these calculations and tested them against more extreme scenarios, confirming their accuracy.

Recommendation:

The Engineering Department recommends supporting the request to waive the upgrade of the sanitary sewer main.

2. To waive requirement to provide cash-in-lieu for future storm main upgrade.

A subdivision application has been submitted to the City, proposing to subdivide one low-density residential lot into two. A condition of approving this application is to upgrade the existing 200 mm diameter storm sewer main, which runs along the east property line as the Subdivision Development Servicing Bylaw (SDSB) requires a minimum storm sewer pipe diameter of 250mm.



Lawson Engineering has submitted a technical assessment, supported by calculations, which suggests that the existing 200mm storm sewer main is adequate and does not require upgrading.
According to their calculations, the approximate runoff rate during a 25-year storm event is 93 liters per second (L/s), while the existing 200mm pipe has a capacity of 100 L/s, providing a buffer of approximately 7%.

However, the City's engineering team has re-evaluated these calculations, taking into account the current zoning bylaw, which allows for up to 60% impervious surface area. Our revised calculations indicate a runoff rate of 103 L/s, exceeding the existing pipe capacity.

Given that both calculations are based on a 25-year storm event, and acknowledging the potential for more severe storms, we strongly recommend upgrading the storm sewer main to ensure adequate capacity and mitigate potential flooding risks.

Recommendation:

The Engineering Department recommends supporting the request to waive the upgrade of the storm main be denied and a cash-in-lieu payment toward the future upgrade be made.

Mustafa Zakreet, EIT
Engineering Assistant

Jenn Wilson P.Eng.,
City Engineer